Arthroscopic Management of Dysplastic Hip Morphologies: Predictors of Success and Failures and Comparison to an Arthroscopic FAI Cohort

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Disclosures

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  - Editorial Board: *Arthroscopy*
  - Consultant: Smith & Nephew and A3 surgical
  - Stock Options: A3 Surgical

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I have no financial relationships to disclose.
Introduction

• Hip Arthroscopy Indications have greatly expanded over the last decade

• Secondary to FAI treatment

• Arthroscopy remains controversial in the setting of subtle Dysplasia

• Structural / Osseous instability cannot be corrected arthroscopically
Methods

• Retrospectively reviewed 88 hips (77 patients) with radiographic findings consistent with hip dysplasia
  – Mean 26.0 months follow-up (range 12-80 months)
  – 71% female, mean age 33.9 years

• Compared to aged matched cohort of 231 hips (215 patients that underwent arthroscopic FAI correction w/o the diagnosis of dysplasia
  – Mean follow-up 22.7 months (12-60 months)
  – 52% female, mean age 32 years

• Pre/post-operative function were evaluated prospectively
  – Modified Harris Hip Score (MHHS)
  – SF-12 scoring
  – and pain on a visual analog score (VAS)
Procedures Performed in Dysplastic Cohort

• 67 labral repairs (76%)

• 20 selective labral debridements (23%)

• 72 capsular repair / plications (82%)

• Associated cam-type morphology in 63 hips (72%)
Results

- Mean LCE 20.8 degrees (range, 8.7 – 24.5)
- Mean Tonnis angle was 11.0 (range, 0 – 22.2 degrees)

Dysplastic Cohort
- Mean latest MHHS of 81.3 (range: 34-100)
- Mean 15.6 point (range: -28 - 60) improvement in MHHS
- 60.9% good to excellent results and 32.2% failures

FAI Cohort
- Mean latest MHHS of 88.4 points
- Mean 24.4 point improvement in MHHS
- 81.2% good/excellent results and 10.5% failures

- All of the above significantly different between the dysplastic and FAI cohort (p<0.01)
Results: Predictive Value

- Decreased head neck offset (Cam-type morphology) trended towards being predictive of better scores in the dysplastic cohort (p=0.079)
- Dysplastic hips that underwent Capsular Plications and Labral Repairs had > good / excellent results and lower failure rates (p<0.05)
- Grade 4 Chondral Defects were predictive of lower scores (p=0.02)
- No statistically significant differences for functional outcomes regarding Gender or Age for either cohort (p>0.05)
- No iatrogenic subluxations / dislocations in either group.
Conclusions

• Functional scores improved post-arthroscopy in hips with mild to borderline dysplastic morphologies

• Compared to the FAI cohort:
  – Good/Excellent results were inferior
  – Failure rates were higher

• Results were independent of Age and Gender
Conclusions

• Predictors of better clinical outcomes in the dysplastic cohort:
  – Associated Cam-type FAI
  – Labral Repair / Capsular Plications

• Caution should be exercised when approaching hips with dysplastic features

• *Arthroscopy cannot correct structural instability but can destabilize the hip*

• Outcomes after pelvic osteotomy in this borderline population are required to determine the optimal treatment.